

In the Claims:

Pending claims 1-4 and 7-18 follow:

1. (previously presented) A method for implementing enhanced proxy Address Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses comprising the steps of:

identifying a Virtual Internet protocol (IP) interface requiring proxy ARP;

dynamically selecting a proxy agent for said Virtual Internet protocol (IP) interface; said selected proxy agent and said Virtual Internet protocol (IP) interface being in a same subnet;

adding an IP address for said Virtual Internet protocol (IP) interface to an address list of an associated physical adapter for said selected proxy agent;

utilizing said physical adapter for said selected proxy agent, and broadcasting said added IP address for said Virtual Internet protocol (IP) interface with a media access control (MAC) address of said associated physical adapter for said selected proxy agent;

responsive to failure of said selected proxy agent, dynamically selecting a new proxy agent for said Virtual Internet protocol (IP) interface by Transmission Control Protocol/Internet Protocol (TCP/IP) code; and

wherein dynamically selecting said proxy agent for said Virtual Internet protocol (IP) interface includes checking for a proxy agent in the same subnet as said Virtual Internet protocol (IP) interface; said same subnet being identified by a portion of a Transmission Control Protocol/Internet Protocol (TCP/IP) Internet address.

2. (original) A method for implementing enhanced proxy Address Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses as recited in claim 1 further includes identifying a broadcast ARP response for said Virtual Internet protocol (IP) interface, and continuing activation for said Virtual Internet protocol (IP) interface including enqueueing said Virtual Internet protocol (IP) interface to a proxy list of said selected proxy agent.

3. (original) A method for implementing enhanced proxy Address Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses as recited in claim 1 further includes setting an associated local IP address of said selected proxy agent in said Virtual Internet protocol (IP) interface.

4. (original) A method for implementing enhanced proxy Address Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses as recited in claim 1 wherein the step of dynamically selecting said proxy agent for said Virtual Internet protocol (IP) interface includes providing Transmission Control Protocol/Internet Protocol (TCP/IP) code for dynamically selecting said proxy agent.

Claims 5-6 (canceled)

7. (original) A method for implementing enhanced proxy Address Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses as recited in claim 1 further includes answering ARP requests for Virtual Internet protocol (IP) addresses with Transmission Control Protocol/Internet Protocol (TCP/IP) code for said selected proxy agent for said Virtual Internet protocol (IP) interface.

8. (previously presented) Apparatus for implementing enhanced proxy Address Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses comprising:

- a local network;
- a server computer having a Virtual Internet protocol (IP) address, a Virtual Internet protocol (IP) interface, and a plurality of physical adapters connecting said server computer to said local network,
- a Transmission Control Protocol/Internet Protocol (TCP/IP) code for dynamically selecting a proxy agent for said Virtual Internet protocol (IP) interface; said Transmission Control Protocol/Internet Protocol (TCP/IP) code being responsive to failure of said selected proxy agent, ; dynamically selecting a new proxy agent is for said Virtual Internet protocol (IP) interface by Transmission Control Protocol/Internet Protocol (TCP/IP) code including checking for a proxy agent in the same subnet as said Virtual Internet protocol (IP) interface; said selected proxy agent and said Virtual Internet protocol (IP) interface being in a same subnet; said same subnet being identified by a portion of a Transmission Control Protocol/Internet Protocol (TCP/IP) Internet address;
- a proxy ARP for Virtual IP interface initiation task for adding an IP address for said Virtual Internet protocol (IP) interface to an address list of an associated one of said physical adapters for said selected proxy agent; and for utilizing said physical adapter for said selected proxy agent for broadcasting said added IP address for said Virtual Internet protocol (IP) interface with a media access control (MAC) address of said associated physical adapter for said selected proxy agent.

9. (original) Apparatus for implementing enhanced proxy Address Resolution Protocol (ARP) as recited in claim 8 wherein said TCP/IP code is responsive to a failure of said physical adapter for said selected proxy agent, for dynamically selecting a new proxy agent for said Virtual Internet protocol (IP) interface.

10. (original) Apparatus for implementing enhanced proxy Address Resolution Protocol (ARP) as recited in claim 8 wherein said TCP/IP code answers ARP requests to said Virtual Internet protocol (IP) address; said ARP requests being provided without a parameter defining an associated local interface being specified with said ARP requests to said Virtual Internet protocol (IP) address.

11. (original) Apparatus for implementing enhanced proxy Address Resolution Protocol (ARP) as recited in claim 8 includes a input/output processor (IOP) response handler task for identifying a broadcast ARP response for said Virtual Internet protocol (IP) interface, and for continuing activation for said Virtual Internet protocol (IP) interface including enqueueing said Virtual Internet protocol (IP) interface to a proxy list of said selected proxy agent.

12. (original) Apparatus for implementing enhanced proxy Address Resolution Protocol (ARP) as recited in claim 11 wherein said IOP response handler task is adapted for setting an associated local IP address of said selected proxy agent in said Virtual Internet protocol (IP) interface to complete activation for said Virtual Internet protocol (IP) interface.

13. (previously presented) A computer program product for implementing enhanced proxy Address Resolution Protocol (ARP) for Virtual Internet protocol (IP)

addresses in a server computer, said computer program product including a computer recording medium for storing program means, and that said program means, when executed by the server computer to cause the server computer to perform the steps of:

identifying a Virtual Internet protocol (IP) interface requiring proxy ARP;

dynamically selecting a proxy agent for said Virtual Internet protocol (IP) interface; said selected proxy agent and said Virtual Internet protocol (IP) interface being in a same subnet;

adding an IP address for said Virtual Internet protocol (IP) interface to an address list of an associated physical adapter for said selected proxy agent;

utilizing said physical adapter for said selected proxy agent, and broadcasting said added IP address for said Virtual Internet protocol (IP) interface with a media access control (MAC) address of said associated physical adapter for said selected proxy agent;

responsive to failure of said selected proxy agent, dynamically selecting a new proxy agent for said Virtual Internet protocol (IP) interface by Transmission Control Protocol/Internet Protocol (TCP/IP) code; and

wherein dynamically selecting said proxy agent for said Virtual Internet protocol (IP) interface includes checking for a proxy agent in the same subnet as said Virtual Internet protocol (IP) interface; said same subnet being identified by a portion of a Transmission Control Protocol/Internet Protocol (TCP/IP) Internet address.

14. (previously presented) A computer program product for implementing enhanced proxy Address Resolution Protocol (ARP) for Virtual Internet protocol (IP)

addresses as recited in claim 13 further includes the step of identifying a broadcast ARP response for said Virtual Internet protocol (IP) interface, and continuing activation for said Virtual Internet protocol (IP) interface including enqueueing said Virtual Internet protocol (IP) interface to a proxy list of said selected proxy agent.

15. (previously presented) A computer program product for implementing enhanced proxy Address Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses as recited in claim 14 further includes the step of setting an associated local IP address of said selected proxy agent in said Virtual Internet protocol (IP) interface to complete activation for said Virtual Internet protocol (IP) interface.

16. (previously presented) A computer program product for implementing enhanced proxy Address Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses as recited in claim 13 wherein Transmission Control Protocol/Internet Protocol (TCP/IP) code is used for the step of dynamically selecting said proxy agent for said Virtual Internet protocol (IP) interface.

17. (previously presented) A computer program product for implementing enhanced proxy Address Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses as recited in claim 16 wherein said Transmission Control Protocol/Internet Protocol (TCP/IP) code is responsive to a failure of said physical adapter for said selected proxy agent, for dynamically selecting a new proxy agent for said Virtual Internet protocol (IP) interface.

18. (previously presented) A computer program product for implementing enhanced proxy Address Resolution Protocol (ARP) for Virtual Internet protocol (IP)

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addresses as recited in claim 16 wherein said Transmission Control Protocol/Internet Protocol (TCP/IP) code utilizes said physical adapter for said selected proxy agent for answering ARP requests to said Virtual Internet protocol (IP) address; said ARP requests being provided without a parameter defining an associated local interface being specified with said ARP requests to said Virtual Internet protocol (IP) address.